

A
REQUEST FOR PROPOSAL
FOR
EAST ST. PAUL AVENUE
BRIDGE OVER THE MILWAUKEE RIVER
REHABILITATION PROJECT

ISSUED BY:
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION



Proposals must be submitted
No later than 4:00PM CDT

January 24, 2012

LATE SUBMITTALS WILL BE REJECTED

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Minority, Woman, and Small Business Enterprise Program

I. Introduction and Background

The City of Milwaukee proposes to rehabilitate the West Saint Paul Avenue Vertical Lift Bridge over the Milwaukee River (P-40-523). The bridge was constructed in 1966 and has a sufficiency rating of 45.5. The project, as proposed, consists of rehabilitating the existing bridge's structural, electrical, hydraulic, and mechanical components. Approach roadways will also be rehabilitated as needed with this project.

It is the intent of this project to provide a rehabilitated bridge that addresses all of the City's safety and operational concerns, meets all state and federal requirements, and accommodates the proposed City of Milwaukee streetcar vehicles and associated rails.

II. Scope of Project

An in-depth inspection of all bridge components was conducted by HNTB and a detailed condition report called 'Bridge Condition Report and Rehabilitation Recommendations' dated September 15, 2011 is attached. The report includes an estimate of costs addressing most of the deficient elements on the bridge.

The design services to be performed under this project include, but are not limited to, the recommendations found in the report prepared by HNTB. Design services are to include complete plans, specifications, and estimates for the St. Paul Avenue bridge rehabilitation project.

Rehabilitation shall consist of complete deck and superstructure replacement at the lift span with the deck designed to be a solid surface system; fixed span improvements; lift span mechanical, hydraulic, and electrical system improvements; bridge house improvements; and necessary approach roadway improvements. The rehabilitation design shall also accommodate future streetcar rails and facilities.

The chosen consultant must meet the 18% Minority, Woman, and Small Business Enterprise Program requirements (formerly Emerging Business Enterprise Program). Please find information about this program in Appendix D.

Note: Design services shall be performed in accordance with the requirements and standards of current editions of the WisDOT's Facilities Development Manual (FDM), the WisDOT Bridge Manual, the WisDOT Standard Specifications for Highway and Structure Construction, AASHTO Standard Specification for Movable Highway Bridges, latest edition, and the AASHTO Standard Specification for Highway Bridges, latest edition. Final contract documents are to be prepared in the WisDOT's format and will become the property of the City of Milwaukee. The project will be let by the City of Milwaukee with 100% local funds.

III. Design Services Requested

The consultant will design and evaluate, where specified, all the necessary structural, electrical, hydraulic, and mechanical components for the renovation and operation of the existing bridge including preparation of the final plans, specifications, quantities, and itemized cost estimates. The consultant will also do the necessary correspondence with all the involved affected companies or agencies, including but not limited to the Department of Natural Resources, the Army Corps of Engineers and Coast Guard to fulfill the requirements needed for the renovation work. The most-recent inspection reports and original plans will be provided for the consultant's use in preparing the proposal.

The consultant will be expected to provide services to answer design related questions during all phases of construction, issue addenda, and assist the contractors with questions regarding the contract documents.

A. Surveys

The consultant will perform necessary surveys, stakeout and collection of required field information to allow project implementation. Survey information shall be sufficient to allow performance of the following tasks and items:

1. Utility coordination
2. Roadway plans

The background survey will include elevations and locations of curb, gutter, flange, ¼ point, and centerline at 25 foot stations; all manholes, water gate valves, utility poles, trees, bushes, planter, walls, fences, railroad facilities, buildings within or near the right of way, and any other features that would be considered during design activities. Furthermore, where the proposed roadway intersects existing cross streets, the survey shall include detailed elevations at 10-foot intervals for 30 feet on either side of East St. Paul Avenue. Existing elevations shall be collected at all walks, driveways, steps, etc at the right of way line and back to existing buildings.

The survey coordinate system used for plan development shall conform to the Milwaukee Streetcar project. The vertical datum shall be in reference to the City of Milwaukee vertical datum.

B. Utilities

Work under this contract will include the following:

1. Coordinating necessary utility adjustments with the Milwaukee Streetcar Phase I project.
2. Coordinating with City Communications
3. Coordinating with City Street Lighting
4. Coordinating utilities for the bridge house (sewer, gas, and water)
5. Coordinating 480V electrical service for each side of the bridge
6. Coordinating with other utilities, as needed. (AT&T, Time Warner Cable, etc)

C. Agency Coordination

The consultant shall coordinate with local, state, and federal agencies having a potential interest in or jurisdiction over the project and supply them with information concerning the project, including 30%, 60%, 90% and final design plans. Coordination will be formally communicated through a letter.

Contact with these agencies shall be made early enough in the development of the project to enable them to make a timely response so that their comments can be considered at the appropriate stage of Services under this contract.

The consultant shall keep the City fully informed of its coordination efforts with agencies.

1. Section 9 Permit:

Reconstruction or modification of an existing bridge across navigable waters of the United States is under the jurisdiction of the U.S. Coast Guard. The scope of work at St. Paul Avenue may include work within the waterway. Therefore a Section 9 permit may be required as part of the project. The consultant will coordinate with the Coast Guard and complete all work necessary to receive a Section 9 permit, if said permit is required.

2. Section 401 and 402 Certifications:

The consultant shall evaluate the effects of the project on water quality, in accordance with the provisions of the Clean Water Act and Chapter TRANS 400, Wisconsin Administrative Code and the procedures as set forth in the Facilities Development Manual. If the scope is to include substructure repair work near the water line or if excavation may be required for rip rap placement then Section 401 and 402 applications may be required.

3. Section 10/404 Permits:

There may be discharge of fill materials into navigable waters of the United States with this bridge rehabilitation if rip rap is required to fill a scour hole adjacent to the pier. Therefore, a Section 10/404 Permit may be required. The consultant will coordinate with the DNR and US Army Corps of Engineers and complete all work necessary to receive a Section 10/404, if applicable.

4. Contaminated & Hazardous Materials:

Asbestos inspection and abatement has been performed on the bridge and bridge house previously by the City. No asbestos remains on the bridge and the City will provide documentation to confirm that asbestos has been removed to facilitate consultant coordination with Wisconsin DNR. It is assumed that the existing steel superstructure contains lead paint and that paint removal will be addressed by the special provisions.

5. The consultant will be required to coordinate with the following state and federal agencies:
 - a. Wisconsin DNR SE District regarding overall project impacts, permits, and the potential presence of threatened and endangered species.
 - b. US Coast Guard, 9th Coast Guard District
 - c. US Army Corps of Engineers, St. Paul District regarding any applicable permits
 - d. U.S. Fish and Wildlife Service (FWS)
 - e. Wisconsin Department of Administration - Coastal Zone Management Program (WDOA)

D. Meetings

Meetings may be scheduled at the request of the consultant or City for the purpose of discussing and reviewing the Services under this contract. It is assumed six (6) such meetings shall be held to plan, review, and coordinate the project with the City's staff.

1. One (1) 30% Plan Review meeting will be held for this project.
2. One (1) 60% Plan Review meeting will be held for this project.
3. One (1) 90% Plan Review meeting will be held for this project.

The consultant shall hold one (1) Operational Planning Meeting (OPM) to discuss the organization and processing of the services under this contract. The consultant shall prepare and send the OPM meeting invitations to all interested utilities and agencies. A meeting agenda will be provided by the consultant one week prior to the OPM to the City. Following the meeting, the consultant shall prepare meeting minutes and send a copy to all interested parties.

The consultant shall hold one (1) Public Involvement Meeting (PIM) where they will be responsible for providing project displays and answering questions and comments in relation to the project.

One (1) meeting will be held in reserve as needed.

Meeting schedules are to be coordinated with the City to ensure that representatives are available to attend the meetings.

E. Roadway

Roadway approaches appurtenant to replace bridge components will be replaced as necessary. Proposed roadway geometries will meet all WisDOT criteria. The design of the project alignment shall be coincident with the existing alignment, or a new alignment to be developed and used under the Milwaukee Streetcar Phase I project. Work under this contract will include coordinating necessary approach roadway improvements with the Milwaukee Streetcar Phase I project.

The consultant will investigate and design, if necessary, new traffic signal preemption as it relates to roadway closures during bridge opening.

The consultant shall include traffic control and detour plans in roadway plans, specifications and estimates.

The consultant will be required to prepare all design plans in accordance with the requirements and standards of the FDM and the WisDOT Standard Specification for Highway and Structure Construction with software that is compatible with MicroStation V8 2004 edition.

The consultant will be required to have the final plans stamped by a registered professional engineer licensed in the State of Wisconsin. The consultant will also be required to provide assistance to City staff during construction activities if questions regarding the plans and specifications arise.

F. St. Paul Avenue Vertical Lift Bridge (B-40-523)

1. General

- a. The consultant shall prepare preliminary and final designs and plans for the following items:
 - i. Structural designs and plans for the following:
 - 1) Rehabilitation of four (4) fixed approach spans, including abutments and wingwalls and two (2) piers, as recommended in the 2011 St Paul Bridge Condition Report and Rehabilitation Recommendations.
 - 2) Replacement of the vertical lift movable span, including: conversion to a solid surface exodermic deck; reconfiguration of lifting legs and jacking beams to accommodate the revised hydraulic system with skew control; and rehabilitation and reconfiguration of the two (2) movable span piers; all as recommended in the 2011 St Paul Bridge Condition Report and Rehabilitation Recommendations.
 - 3) Rehabilitation of the bridge control house.
 - ii. Electrical designs and plans for vertical lift span operating equipment, navigation lighting, substructure lighting, and other lighting and electrical items necessary for the operation of the lift bridge and control house, as recommended in the 2011 St Paul Bridge Condition Report and Rehabilitation Recommendations.
 - iii. Upgrade existing remote system and provide designs and plans for the St. Paul Avenue Bridge to continue to be remotely operated from the Michigan Avenue Bridge, as well as locally operated.
 - iv. Mechanical and hydraulic designs and plans for vertical lift span operating equipment, as recommended in the 2011 St Paul Bridge Condition Report and Rehabilitation Recommendations.

- v. Architectural design and plans for the bridge control house rehabilitation.
 - vi. Designs and plans for plumbing, water, and other utilities required for the bridge control house rehabilitation.
 - vii. Investigate incorporating Accelerated Bridge Construction (ABC) techniques in the lift span construction. Since full replacement of the lift span superstructure, lift beams and lifting legs is required, there exists options to assemble the lift span off-site and float the completed lift span (or portions thereof) on barges to enable a shorter construction duration.
- b. No Structure Survey Report (SSR) will be prepared. A Wisconsin DOT Bureau of Structures preliminary plan and SSR e-submittal and review is not required for this project. Preliminary Structure Plans will be completed during the preliminary phase of this project under this contract and submitted to the City. See Item (2) below. Hydraulic and scour analysis may be required for necessary permitting to implement scour protection at the observed scour hole at the pier.
 - c. The consultant shall develop Final Structure Design and Plans for the rehabilitated structure over the Milwaukee River using current AASHTO Standard Specification bridge design standards. Structure type, size and details will conform to the preliminary structure plans and approved design criteria prepared under the preliminary phase of the project. The aforementioned design elements may be modified to accommodate detailed final design requirements. Any such modifications shall not alter the design intent of the preliminary plans and design criteria.
 - d. All standards and materials for the design will be in compliance with the following:
 - i. American Association of State Highway Transportation Officials (AASHTO), latest edition.
 - ii. AASHTO Standard Specification for Movable Highway Bridges, latest edition.
 - iii. Wisconsin Bridge Manual, latest edition.
 - iv. State of Wisconsin Standard Specification for Highway and Structure Construction, latest edition.
 - v. Statutes of the State of Wisconsin.
 - vi. Ordinances of the City of Milwaukee.
 - e. Although the St. Paul Bridge Condition Report becomes a basis for the rehabilitation work plan and project scope, the consultant shall provide any additional investigation, inspection, testing, and calculations deemed necessary to supplement the Condition Report to allow the consultant to develop final structure plans and specifications.

2. Preliminary Plan Development

The consultant shall prepare preliminary design and plans and refine the design concept for the proposed St. Paul Avenue Bridge, in accordance with the procedures set forth in the WisDOT Bridge Manual. The completed preliminary plan shall show the structure plan,

elevation and typical cross section, and all pertinent data shall appear on the first sheet(s) of the completed structure plans. Four prints of this plan and the Structure shall be submitted for review. The City will review the preliminary plan and return one print to the consultant showing requested revisions, if any.

a. Preparation of the preliminary bridge plan will consist of the following sheets:

- i. General Plan and Elevation
- ii. Typical Bridge Section
- iii. General design notes, design data, and preliminary listing of bid items
- iv. Framing Plan (preliminary)
- v. Machinery Layout (preliminary)
- vi. Hydraulic Schematic (preliminary)
- vii. One-line electrical diagram (preliminary)
- viii. Bridge House Rehabilitation Preliminary Plan & Elevations

b. The consultant shall complete the following tasks relative to the design of the rehabilitated bridge across the Milwaukee River:

- i. Evaluation of bridge aesthetic enhancements, focusing on an improved bridge house roof line and bridge railing. These amenities will be discussed with the City during development.
- ii. Refinement of the vertical lift span design concept and Design Criteria for structural, hydraulic, mechanical and electrical system. It is assumed that the electrical and hydraulic controls under development for the Juneau Avenue and Wisconsin Avenue Bridges will be the starting point for the hydraulic and electrical controls preliminary design development for the St Paul Bridge.
- iii. Refine the design of a solid surface lightweight concrete exodermic deck in conjunction with the design of the hydraulic system, counterweights and mechanical systems.
- iv. Further evaluate implementing a traffic resistance barrier to replace the existing bumper beam system and traffic gates. The resistance barrier arms must not interfere with the proposed streetcar overhead control system catenary wires while in the raised position.

3. Assumptions

The consultant assumes the following relative to this contract and the design and plan preparation of the rehabilitation of the St. Paul Avenue lift bridge:

- a. The fixed and lift spans, including the operating systems, will be designed to accommodate future streetcar loading.
- b. The vertical lift span will be replaced, including the replacement of all the structural steel and use of a solid surface deck system.

- c. Existing steel counterweights may be considered for reuse if salvageable. Additional weight will be added as necessary.
- d. The fixed spans will be rehabilitated, including replacement of the deck, replacement of the joints, and cleaning and painting of the existing steel superstructure.
- e. The existing abutments will be rehabilitated, including repairs as required followed by concrete staining.
- f. The existing piers will be rehabilitated, including repairs as required, reconfiguration of the hydraulic jack pedestals, four new columns per pier for the counterweight shaft bearings, and two new roller guide struts. Other improvements will be made to the pier walkways and railings, access ladders, stairways, and bumper guards.
- g. The bridge railings will be replaced with a two-line FHWA crash-tested rail at the curb line and a pedestrian rated railing at the exterior edge of the sidewalk.
- h. It will be the Contractor's responsibility to obtain any required permits and be responsible to meet the requirements of local codes.
- i. The existing control house will be rehabilitated on the exterior and interior. Renovations will include mechanical, electrical, and plumbing improvements as well as complete roof replacement.
- j. For the purposes of this contract it is assumed that the use of a circular stairway and other types of existing access to the control house and lower pier levels will be maintained. Access improvements will be designed so that they will be constructed per OSHA standards.
- k. The new hydraulic power unit at Pier 2 will operate four new jacking cylinders using flow dividers in the hydraulic system to maintain equal speed in the four jacking cylinders, thereby eliminating the need for a mechanical equalizer system.
- l. The hydraulic and mechanical components will be sized appropriately for the solid surface lift span deck.
- m. Details that are assumed to be prepared by the contractor, submitted as shop drawings, and will not be included in the plans including PLC/Panel view cable connection details, I/O rack module group details, remote console flex I/O rack details and audio/video system cabinet details. Video, audio and remote communication system concepts and specifications will include only enough detail in order for the contractor to bid on the project, detail sheets will not be provided.
- n. The consultant will require the hydraulic and electrical contractors to assemble operational and maintenance manuals for the systems provided. The contract specifications will detail a very specific minimum level of information that must be included in these manuals. Consultant review and approval of these manuals is not included in this contract. Those services are anticipated under a future construction services phase of the project.
- o. Lighting and receptacle plans for the operator house, machinery areas, and roadway lighting will be developed to meet current AASHTO, IES, and municipality standards.
- p. It is not anticipated that underwater inspection will be performed under this contract. Improvements will be made based on the June 2008 underwater inspection report. Soundings will be performed to determine the limits of rip rap to fill the observed scour hole at the pier.

4. Electrical-Final Design Phase

A further description of services provided for the electrical tasks follows:

A complete electrical control system and distribution system will be provided for the rehabilitated vertical lift bridge. The plans will provide full details of key components mounted on the structure. A new dual source electrical utility service will be provided. The new distribution system 277/480 volts, 3 phase, 4 wire to both piers. Step down transformers will be used to provide 120/208 volt, 3 phase service for pier lighting, control tower lighting and receptacles and will also provide power for the traffic gates. The control logic will be fully detailed on schematic diagrams with full cross reference provided between relay contacts and relay coils and between schematic drawing sheets.

- a. Rehabilitation plans shall include the following improvements:
 - i. Replace drip loops with new conduits across the lift span with all new electrical items.
 - ii. Provide another electrical service to the bridge to eliminate the generator.
 - iii. Provide simplified design with components inside the bridge house with easy accessibility for the new traffic barrier controls.
 - iv. Provide new lighting within the control tower, on the lift span and in pier pit areas.
 - v. Provide new navigation lighting and wire.
 - vi. Provide new 20 amp electrical outlets in piers and pit areas. Provide one on each end of the pier and one in the pit.
 - vii. Provide new wiring and conduit throughout the bridge, control house and pit areas
 - viii. Upgrade CCTV control panel and monitors to larger LCD displays type and configure system for remote monitoring from a remote location provided by the City of Milwaukee.
 - ix. Upgrade CCTV cameras and wiring.
 - x. Add dedicated communication lines into the bridge house for telephone and internet connection.
 - xi. Replace the electrical control system.
 - xii. Upgrade existing remote control operation with PLC interface with the bridge relay based control system of the St. Paul Bridge from the Michigan Street Bridge.
 - xiii. Replace the existing traffic gates and bumper beam assembly with a new system, possibly barrier gates if the overhead control for the streetcar system allows.
 - xiv. Other improvements, as detailed in the St. Paul Condition Report shall also be included in the rehabilitation plans.
- b. Preparation of final bridge plans will consist, as a minimum, plans of the following items:
 - i. Final One Line Diagram
 - ii. Control house power wiring conduit layouts
 - iii. Approach span and lift span power wiring conduit layouts
 - iv. Rest pier power wiring conduit layouts

- v. Control house lighting plans
 - vi. Approach span and lift span lighting plans
 - vii. Rest pier lighting plans
 - viii. Complete limit switch mounting details
 - ix. Pier and structure grounding plans and details
 - x. Traffic gate and traffic signal details
 - xi. Panel board and transformer schedules
 - xii. Final control console layout
 - xiii. Relay cabinet & switchboard cabinet details
 - xiv. Fully detailed and cross referenced control schematic diagrams
 - xv. Wiring schedules, circuit routing schedules and raceway schedules
 - xvi. Upgrade of existing system for remote control of bridge from the Michigan Street Bridge as well as local control at St Paul.
 - xvii. CCTV system and detail plans
 - xviii. St. Paul bridge PLC plans
- c. The standard, materials, equipment, and component items of the electrical system will be designed to be in compliance with the following:
- i. American Association of State Highway Transportation Officials (AASHTO), latest edition
 - ii. AASHTO Standard Specification for Movable Bridges, latest edition
 - iii. National Electrical Code
 - iv. Statue of the State of Wisconsin
 - v. Ordinances of the City of Milwaukee
 - vi. A.E.E. Standardization rules
 - vii. Federal Navigation Rules
 - viii. WE Energies Guidelines
 - ix. National Fire Protection Association
 - x. Manufacturer's Recommendations
- d. In addition to final design and plan development, the consultant shall complete the following tasks relative to the electrical components of the rehabilitated bridge across the Milwaukee River:
- i. Conduct a site visit at the Michigan Street Bridge to obtain the current conditions within the control house for the new remote control equipment and any required modifications to re-establish the remote control of the St. Paul Avenue Bridge from the Michigan Street Bridge control house.

- ii. Participate in the 30%, 60% and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
- iii. Prepare Special Provisions
- iv. Prepare construction cost estimate
- v. QA/QC review of the electrical plans and special provisions at the 90% complete level.
- vi. Bid Assistance

5. Mechanical-Final Design Phase

A further description of services provided for the Mechanical design and plan production tasks follows:

The mechanical tasks incorporate the design and plan production for the sheaves, ropes, shafts, bearings, and bearing supports for the counterweight assembly. The equalizer assemblies will be removed. The tasks also incorporate design and plan production for the span guides and traffic gate barrier or bumper beam assembly, whichever is compatible with the overhead control for the proposed streetcar system. Other improvements, as detailed in the St. Paul Condition Report, shall also be included in the rehabilitation plans. These machinery components will meet the requirements of AASHTO unless stated otherwise in the design criteria. The plans will provide full detail and material lists for the assemblies to stabilize the vertical lift bridge. The plans will provide full details of key components mounted on the structure.

- a. Preparation of mechanical bridge plans will consist, as a minimum, plans of the following items:
 - i. Mechanical Demolition
 - ii. Mechanical System Layout
 - iii. Counterweight Machinery
 - iv. Counterweight Details
 - v. Span Guide
 - vi. Traffic Gate Barrier or Bumper Beam Assembly
- b. All standards, materials, equipment, and component items of the mechanical design will be in compliance with the following:
 - i. ASTM Standards
 - ii. ANSI Standards
 - iii. AISI Standards
 - iv. AASHTO Standard Specification for Movable Highway Bridges, latest edition
 - v. State of Wisconsin Standard Specification for Highway and Structure Construction, latest edition.

- c. In addition to final design and plan development, the consultant shall complete the following tasks relative to the mechanical components of the rehabilitated bridge across the Milwaukee River:
 - i. Participate in the 30%, 60% and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare construction cost estimate
 - iv. QA/QC review of the hydraulic plans, special provisions, and calculations at the 90% complete level.
 - v. Bid Assistance

6. Hydraulic-Final Design Phase:

A further description of services provided for the hydraulic design tasks follows:

A new hydraulic system will be provided for the rehabilitated vertical lift bridge. The plans will provide full details of key components mounted on the structure. New hydraulic power units will be provided that would operate four new jacking cylinders using flow dividers in the hydraulic system to maintain equal speed in the four jacking cylinders, thereby eliminating the need for a mechanical equalizer system. New hydraulic lines would be provided between the new HPU and the new jacking cylinders. The new jacking cylinders would be of the existing plunger type, with total capacity of the four new cylinders increased from that of the existing two cylinders. Existing brakes would be removed, as would the existing mechanical equalizers, and neither would be replaced. Other improvements, as detailed in the St. Paul Condition Report, shall be included in the rehabilitation plans.

- a. Preparation of final bridge plans will consist, as a minimum, plans of the following items:
 - i. Final Schematic Diagram, including component schedule
 - ii. HPU Plan, Elevation, and Details
 - iii. Approach span and lift span piping layouts
 - iv. Hydraulic Jacking Cylinder configuration
 - v. Hydraulic Jacking Cylinder mounting details and accessories
- b. In addition to final design and plan development, the consultant shall complete the following tasks relative to the final hydraulic components of the rehabilitated bridge across the Milwaukee River:
 - i. Participate in the 30%, 60% and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions

- iii. Prepare construction cost estimate
- iv. QA/QC review of the hydraulic plans, special provisions, and calculations at the 90% complete level.
- v. Bid Assistance

7. Control House Architectural-Final Design Phase

A further description of services provided for the control house architectural tasks follows:

The following tasks will be performed for the architectural rehabilitation of the operator's control house. The consultant shall prepare plans, specifications and estimates for the components of the Control House. This material shall be included as part of the PS&E package for the rehabilitated bridge.

- a. Major exterior improvements include replacing the stairway from the sidewalk down to the second level of the control house, replacing the landing at the base of these stairs, replacing the entry door, possibly removing and rebuilding the north CMU control house wall (dependent upon access necessary for hydraulic equipment replacement), replace the door from the control house Equipment Room to the pier pit, waterproof the north wall, clean and/or coat the exterior walls, replace the windows in the Control Room, replace the wall panels between the windows, replace the soffits and fascias, and replace the roof. Other improvements, as detailed in the St. Paul Bridge Condition Report, shall also be included in the rehabilitation plans.
- b. Prepare renderings for a minimum of two roof styles different from the original for review and selection by the City. Prepare final plans of the selected roof style.
- c. Primary interior improvements include patching plaster walls, painting walls, cleaning floors, and replacing Equipment Room cabinetry and furnishings. Other improvements, as detailed in the St. Paul Bridge Condition Report, shall also be included in the rehabilitation plans.
- d. New and rehabilitated components shall meet the requirements of the following design codes: The Wisconsin Division of Safety and Buildings Administrative Code, ASCE 7-95 Minimum Design Loads for Buildings and Other Structures, Standards of the American Institute of Steel Construction (AISC), American Concrete Institute (ACI), and other applicable industry standards will be observed.
- e. Loads
 - i. Roof Snow Loads:
 - 1) Flat Roof Snow Load, P_f = no less than 30 psf
 - 2) Ground Snow Load, P_g = 40 psf
 - 3) Snow Exposure Factor, C_e = 0.8
 - 4) Thermal Factor, C_t = 1.0

- 5) Building Classification, Category II
 - 6) Snow Load Importance Factor, $I = 1.0$
 - 7) plus Drifting Snow Surcharges
- ii. Wind Loads:
- 1) Basic Wind Speed, $V = 100$ mph
 - 2) Exposure D
 - 3) Building Classification Category II
 - 4) Wind Load Importance Factor, $I = 1.0$
 - 5) Design Wind Pressure, $P_{max} = 25$ psf
 - 6) Roof Uplift, $P_{max} = 30$ psf
- f. A set of Contract Drawings and any “Special Provision” specifications will be prepared, suitable for competitive bidding. The drawings shall consist of all floor plans and a roof plan, exterior elevations, cross sections and longitudinal sections through the building, and detail sections as necessary to convey the rehabilitation and improvements. Special Provision specifications will be prepared in the WisDOT format for all “Architectural” materials used which are not included in the WisDOT’s Standard Specifications.
- g. In addition to design and plan development, the consultant shall complete the following tasks relative to the operator’s control house:
- i. Participate in the 30%, 60% and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare construction cost estimate
 - iv. QA/QC review of the architectural control house plans, special provisions, and calculations at the 90% complete level.
 - v. Bid Assistance

8. Control House Mechanical/Electrical/Plumbing-Final Design Phase

The following tasks will be performed for the M/E/P rehabilitation of the operator’s control house. The CONSULTANT shall prepare plans, specifications and estimates for the components of the Control House. This material shall be included as part of the PS&E package for the rehabilitated bridge.

- a. Major improvements include replacing electrical equipment, replacing lights, replacing and installing additional receptacles, replacing conduit and outlet boxes, improving the heating and cooling system, and replacing the toilet and water heater. Other improvements, as detailed in the St. Paul Bridge Condition Report, shall also include in the rehabilitation plans.

- b. A set of Contract Drawings and any “Special Provision” specifications will be prepared, suitable for competitive bidding. The drawings shall consist of all floor plans, elevations, sections, and details as necessary to convey the rehabilitation and improvements. Special Provision specifications will be prepared in the WisDOT format for all M/E/P materials used which are not included in the WisDOT’s Standard Specifications.
- c. In addition to design and plan development, the consultant shall complete the following tasks relative to the operator’s control house HVAC and plumbing:
 - i. Prepare Special Provisions
 - ii. Prepare construction cost estimate
 - iii. QA/QC review of the M/E/P plans, special provisions, and calculations at the 90% complete level.
 - iv. Bid Assistance.

IV. Submittals

The consultant shall submit to the City Preliminary bridge plans for review and confirmation of design features. The Draft Final PS&E shall be submitted 1 month prior to the final PS&E to allow a two (2) week City review period and two (2) weeks for plan revisions :

- Preliminary Plans (30%)
- Intermediate PS&E Submittal (60%)
 - Plans
 - Special Provisions
 - Estimate
- Draft Final PS&E Submittal (90%)
 - Plans
 - Special Provisions
 - Estimate
- Final PS&E Submittal
 - Plans
 - Special Provisions
 - Design Computations
 - Quantity Calculations
 - Cost Estimate
 - Structure Inventory Forms
 - Rating Summary Sheet

A. Plans, Specifications, and Estimates (P.S.&E)

1. The consultant shall prepare a complete P.S. & E. conforming to the City of Milwaukee Bid Packaging requirements.
2. The consultant shall provide one set of plans and specifications for each utility within the project limits for incorporation of the final comments prior to the P.S. & E. submittal date.
3. The consultant shall provide to the City final design drawings files in Microstation V8i dgn format. The consultant shall provide to the City special provision documents in Microsoft Word format. The consultant shall provide to the City construction cost estimates in Microsoft Excel format.

B. Special Provisions

The consultant shall prepare Special Provisions for specialty and non-standard bid items, including structural, mechanical, hydraulic, electrical, and architectural items.

C. Cost Estimates

The consultant shall prepare preliminary and final construction cost estimates for all structural, mechanical, hydraulic, electrical, and architectural items.

D. Bid Assistance

The consultant will be available during the bidding process to answer Contractor's questions regarding the intent of the plans and specifications

V. Schedule

DATE	EVENT
1. December 6, 2011	Date of issue of the RFP
2. December 19, 2011	Last day for submitting requests for clarification
3. December 29, 2011	Written responses to requests for clarification
4. January 24, 2012	Proposals due
5. February 14, 2012	Interviews for consultant
6. February 20, 2012	Consultant selection
7. March 19, 2012	Design services contract negotiations Complete
8. March 26, 2012	Notice to proceed issued
9. May 28, 2012	30% PS&E to City
10. August 27, 2012	60% PS&E to City
11. December 17, 2012	90% PS&E to City
12. February 4, 2013	PS&E Date
13. April 3, 2013	Let Date
14. August 2013	Construction Start

VI. Preparing and Submitting a Proposal

A. General Instructions

All proposals shall comply with the following instructions. These instructions are intended to ensure that submissions contain the information and documentation required by the City of Milwaukee, DPW, and submissions have a degree of uniformity in the presentation of material, which will facilitate evaluation by the City's Evaluation and Selection Committee.

The evaluation and selection of a consultant and the contract will be based on the information contained in the proposals plus references. Failure to respond to each of the requirements in the RFP may be basis for rejecting a response.

Elaborate submittals beyond that sufficient to present a complete and effective proposal, are not necessary or desired.

All material submitted pursuant to the RFP shall become the property of the City of Milwaukee, DPW. All documents pertaining to this RFP shall be kept confidential. No information about any proposals shall be released until the selection process is complete.

The selected consultant will be required to assume responsibility for all services offered in their proposal whether or not they perform them directly or through a sub-consultant.

The top ranked firms who submit an acceptable written proposal will be required to make an oral presentation of their proposal to the consultant selection committee.

The consultant shall retain a complete project file that includes all submittals and approvals contained in these instructions and other pertinent documents to support project procurement, development, implementation and cost.

B. Clarification and/or Revisions to the Specifications and Requirements

Any questions concerning this RFP must be submitted in writing by 4:00PM CDT on December 19, 2011 to:

Mr. Craig Liberto, P.E.
Structural Design Manager
City of Milwaukee
Infrastructure Services Division

841 North Broadway, Room 907
Milwaukee, WI 53202
Fax: 414-286-0475
Email: craig.liberto@milwaukee.gov

If a consultant discovers any significant ambiguity, error, conflict, discrepancy, omissions, or other deficiency in the RFP, the consultant should immediately notify the above named individual of such error and request modification or clarification of the RFP document.

In the event that it becomes necessary to provide additional clarifying data or information, or to revise any part of this RFP, revisions/amendments and/or addendums will be provided to all recipients of this initial RFP.

C. Incurring Costs

The City of Milwaukee is not liable for any cost incurred by consultants in replying to this RFP.

D. Submitting the Proposal

Consultants must submit an original and six copies (seven total) of all materials required for acceptance of their proposal by 4:00PM CDT on January 24, 2012, to:

Mr. Jeffrey S. Polenske, P.E.
City Engineer
City of Milwaukee
Infrastructure Services Division
841 North Broadway, Room 701
Milwaukee, WI 53202

The proposal must conform to the format and content prescribed in this RFP. The City reserves the right to reject any or all proposals that fail to adhere to this format and content.

Proposals must be received in the above office by the specified time stated above. All submittals must be time-stamped in the City Engineer's office by the stated time.

Proposals received after the deadline shall be returned to the sender unopened.

E. Proposal Organization and Format

Proposals should be typed and submitted on 8.5 by 11-inch paper bound securely. Proposals should be organized and presented in the order and by the number assigned in the RFP. Proposals must be organized with the following heading and subheadings. Each heading and subheading should be separated by tabs or otherwise clearly marked. The RFP sections, which should be submitted or responded to, are:

1. Cover Letter – The cover letter or executive summary should state briefly the key points of the firm’s proposal
2. Table of Contents
3. Introduction/Identification
 - Names and addresses of all firms working on the job and where they are incorporated
 - Where the firms are licensed to operate
 - Contact information of individual authorized to negotiate a contract for the firm or team.
4. Project Approach – Provide a description of the intended approach to accomplishing the various design elements associated with the rehabilitation including final products associated with each element. Also, identify a milestone schedule to complete the services by the specified completion date.
5. Firm/Team Background, Qualifications, and Experience
 - General description of the firm/team’s background, specialties, etc.
 - Approximate percentages and responsibilities for each firm on the team, if more than one firm is identified on the project.
 - Identification of the firm/team’s experience on similar projects.
6. Team Staff – Experience and Qualifications
 - Organization chart of the key team members
 - Relevant experience of key team members
 - Resumes of key team members
7. Summary of manpower requirements with an hourly breakdown of tasks to be performed by each team member. Provide an initial estimated level of effort in hours by employee classification as well as ratio of pay, overhead rates and profit. For purposes of initial estimating level of effort refer to the assumptions in the Request for Proposal. Further negotiations with the consultant selected to complete the project will establish the final level of effort and compensation for it.
8. The chosen consultant must meet an 18% participation rate in the Minority, Woman, and Small Business Enterprise Program. (Formerly Emerging Business Enterprise Program)

VII. Proposal Selection and Award Process

A. Preliminary Evaluation

The proposals will first be reviewed to determine if the format requirements are met. Failure to meet these requirement may result in the proposal being rejected.

The City of Milwaukee reserves the right to accept or reject any or all proposals and to waive irregularities and technicalities, which in its opinion would best serve the interests of the City. The City of Milwaukee reserves the right to make investigations and inquiries, as it deems necessary to determine the ability and qualifications of any submitting firm or team to perform the work or services requested.

B. Proposal Ranking

Accepted proposals will be reviewed by the evaluation committee and ranked with regard to the stated criteria.

C. Evaluation Criteria

The proposals will be ranked using, but not limited to, the following criteria:

- Team Qualifications
- Team's general experience with movable bridge engineering, bridge rehabilitations and the WisDOT facilities development process.
- Team's specific experience with individual services included in this RFP.
- Staff Qualifications
- Key team members' overall experience and qualifications
- Key team members' availability
- Project Approach
- Ability to complete the project on schedule
- Estimated level of effort
- Local presence to coordinate and administer the project
- Minority, Woman, and Small Business Enterprise participation

D. Notification of Intent to Begin Negotiations

All consultants who respond to this RFP will be notified in writing of the final selection and the City's intent to begin negotiations with the highest-ranking consultant.

E. Award and Final Offers

The proposals will be ranked and the City will request interviews with the top ranked firms. The selection of the most qualified consultant will be made based on the evaluation criteria indicated in Section C and the interview results. Contract terms will be negotiated with the consultant that submitted the highest-ranking proposal.

If the City and the highest-ranking consultant cannot agree on the contract terms, the terms will be negotiated with the next highest-ranking consultant, and so forth until an award can be made.

F. Contracts

The negotiated contract will be a Not to Exceed, Actual Costs plus fixed fee. Compensation for extra work will be negotiated on the basis of detailed hourly costs.

Payment will be made monthly upon receipt of the contractors billing statement and progress report.

Other than as noted herein, contact of communication, direct or indirect, on behalf of any consultant regarding this Request for Proposal with elected or appointed officials and/or City staff or representatives shall result in disqualification.

APPENDIX A:

ORIGINAL ST. PAUL AVENUE VERTICAL LIFT BRIDGE PLANS

ORIGINAL ST. PAUL AVENUE VERTICAL LIFT BRIDGE
SPECIFICATIONS

ORIGINAL ST. PAUL AVENUE VERTICAL LIFT BRIDGE SHOP
DRAWINGS

APPENDIX B:

2008 DIVE INSPECTION REPORT

2011 ANNUAL BRIDGE INSPECTION REPORT

APPENDIX C:

BRIDGE CONDITION REPORT AND REHABILITATION
RECOMMENDATIONS
BY: HNTB

APPENDIX D:

PROFESSIONAL SERVICES CONTRACT

MINORITY, WOMAN, AND SMALL BUSINESS ENTERPRISE
REQUIREMENTS